

Title	Attempts toward creative reconstruction using arts relocation and reconstruction supported by insurance 2011 × New Zealand
Author(s)	Otani, Junko
Citation	Osaka Human Sciences. 4 p.1-p.28
Issue Date	2018-03
oaire:version	VoR
URL	https://doi.org/10.18910/68277
rights	
Note	

Osaka University Knowledge Archive : OUKA

<https://ir.library.osaka-u.ac.jp/>

Osaka University

ATTEMPTS TOWARD CREATIVE RECONSTRUCTION USING ARTS RELOCATION AND RECONSTRUCTION SUPPORTED BY INSURANCE 2011 × New Zealand

JUNKO OTANI*

Abstract

This paper will take up the Canterbury earthquake in New Zealand, which occurred in 2011, as an example for discussing the creative reconstruction. Its main characteristics were summarized into the following 3 points. Firstly, the self-help-centric solutions based on the enhancing of insurance have been addressed. Secondly, in conjunction with the aforementioned issue, mobility of the population is high and many people have moved out of the affected area after the disaster. Thirdly, reconstructions using works of art have been attempted at the most disaster-stricken area. The reason why works of art have been made in the affected area is that many spaces such as vacant lots and walls which could not be immediately reconstructed became available for use after building collapses and mass move-outs of many individuals, families, and companies. The background behind the high rate of moving out and relocation of people can be accounted for by the enhancing of the insurance system in New Zealand society, and the alliance between the government, such as CERA (Canterbury Earthquake Recovery Authority), and civil society. What the example from New Zealand demonstrates is that temporary art in affected areas has the power to provide vibrancy to scenery which looked to have fallen behind in reconstruction, and to convert the area into a place where people could gather again.

Key words: Canterbury earthquake, Christchurch, creative reconstruction, art, insurance

This article is the English transformation of the original one “Otani, J., (2015). Aato niyoriu souzoutekifukkou no kuwade: Hoken ni sasaerareta ido/Saiken, 2011 × New Zealand (「アートによる創造的復興の企て—保険に支えられた移動／再建, 2011 × ニュージーランド」: Strategic attempt of creative restoration by art; Relocation and Reconstruction supported by insurance, 2011 × New Zealand.). 第9章299–326頁. 清水展・木村周平編著『新しい人間, 新しい社会—復興の物語を再創造する』災害対応の地域研究シリーズ第5巻, 京都大学学術出版会, 2015年. (Shimizu Hiromu and Kimura Shuhei (eds.). 2015. Emergence of New People and New Community: Re-Imaging of Disaster Reconstruction. Area Studies on Disaster Risk Management Series 5. Kyoto University Press. Chapter 9, pp. 299–326. (in Japanese)”. The publication of its English transformation has been permitted by the Kyoto University Press, Japan.

* Graduate School of Human Sciences, Osaka University, 1-2, Yamadaoka, Suita, Osaka 565-0871, Japan

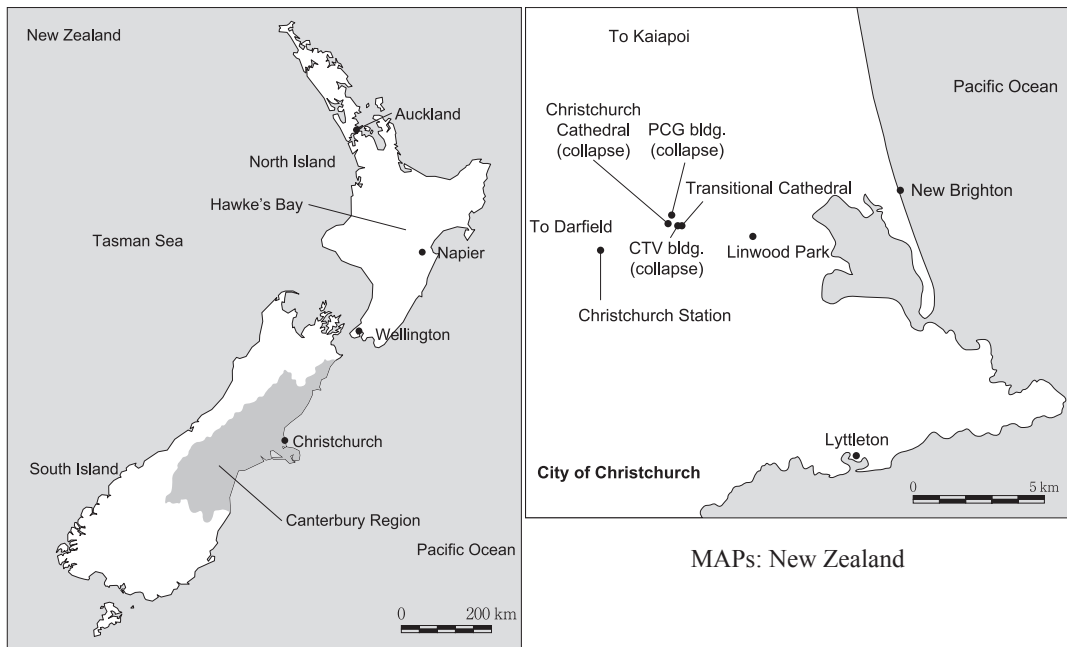


PHOTO 1. Memorial for the 2011 Canterbury earthquake victims. All the white chairs vary in its shape and design, representing 185 victims, including a baby cradle. White triangle building behind is the backside of the transitional cathedral made of cardboard tubes designed by Mr Shigeru Ban.



PHOTO 2. Art sculpture built on the vacant lot of collapsed buildings on Main Street in the port city of Lyttelton. On the ground is mosaic art which gives hope towards reconstruction, made by children to depict people holding hands. Benches have been installed in the hope that this location will be a place of gathering and relaxation for people despite its temporary status (Christchurch city, August 2014).

This chapter will take up the Canterbury earthquake, which occurred in New Zealand, as an example for discussing the creative reconstruction that can be observed there^{*1}. Taking a bird's eye view, in advance, of New Zealand society's response to the earthquake, I can summarize its main characteristics into the following 3 points. Firstly, the self-help-centric solutions based on the enhancing of insurance have been addressed (provided that the situation is not perfectly idealistic due to the fact that the insurance has not been paid steadily, as described later, and also due to other reasons). Secondly, in conjunction with the aforementioned issue, mobility of the population is high and many people have moved out of the affected area after the disaster. Thirdly, reconstructions using works of art have been attempted at the most disaster-stricken

^{*1} This paper is an edited version based on my previous paper [Otani 2014a, 2014b]. As preparation for writing this paper, I had an opportunity in 2013 to conduct a field survey as a visiting research fellow at the University of Canterbury after receiving a fellowship from The Royal Society of New Zealand (RSNZ) through the Bilateral Programs by the Japan Society for the Promotion of Science. In 2014, I conducted a follow-up survey which was subsidized by the Univers Foundation. I would like to express my gratitude to the persons involved in the University, the Canterbury Earthquake Recovery Authority (CERA), City Hall, the Ministry of Social Development (MSD), the Canterbury Department of Health, as well as journalists, museums, residents, those who are working for reconstruction while suffering from the disaster, and many others who supported my survey.

area. The reason why works of art have been made in the affected area is that many spaces such as vacant lots and walls which could not be immediately reconstructed became available for use after building collapses and mass move-outs of many individuals, families, and companies. The background behind the high rate of moving out and relocation of people can be accounted for by the enhancing of the insurance system in New Zealand society, and the alliance between the government, such as CERA (Canterbury Earthquake Recovery Authority), and civil society.

In this chapter, the actual circumstances of the disaster as well as reconstruction through the enhancement of insurance will be described, followed by a description of the emerging vacant spaces as a result of people moving out. At the end, works of art that utilize those spaces will be introduced. Works of art do not contribute economically to reconstruction, and are not considered to be significant in Japan. However, what the example in this chapter demonstrates is that temporary art in affected areas has the power to provide vibrancy to scenery which looked to have fallen behind in reconstruction, and to convert the area into a place where people could gather again.

1. The general condition at the affected area of the Canterbury Earthquake

1.1 Repetitive earthquakes

On February 22, 2011 at 12:51 p.m. (Local time, 3 hours ahead of Japan), a large earthquake occurred whose epicenter was at the outskirts of Christchurch city in New Zealand. The total number of casualties from this earthquake was 186, and most of them was due to the collapse of the Canterbury TV (CTV) building, which resulted in 115 deaths alone^{*2}. Because an English language school was in the CTV building, many Asian students, including 28 Japanese students, got involved, and the Japanese media made near-daily broadcasts focusing on such Japanese casualties at the time. However, 17 days later, once the Tohoku earthquake hit Japan, broadcasting on the Christchurch earthquake almost vanished in Japan. (See Photo 4.)

Much like Japan, New Zealand stands right on the border of plates, which not only makes New Zealand a country with many earthquakes, but earthquakes as a part of its traditional religion (See the photo on page 324 in the original Japanese book. See Photo 28 in this paper.). In actuality, not to mention the abovementioned earthquake on February 22nd, the same area had been experiencing consecutive earthquakes at the time. Counting only major quakes, the first one was the Darfield earthquake on September 4th, 2010. The Christchurch quake on February 22nd was the second, and the third major quake occurred on June 13th, followed by the forth, which was on December 23rd. During this period, more than 12,000 aftershocks were observed. The name “Canterbury earthquake” sometimes refers to the individual earthquake, but it also

^{*2} The number of total deaths was 185 individuals, but one individual was additionally counted later. Of those, 115 casualties were caused by the collapse of the Canterbury TV (CTV) building, and 18 dead were found in the Pyne Gould Corporation (PGC) building. Adding the 36 deaths in other central business district (CBD), the total loss in the CBD was 169 [The Press 2013: 105].

serves as a collective name for this series of earthquakes from time to time. Since then, because the after quake continued in 2012 and 2013^{*3}, people came to wonder whether or not they were suffering from Post-Traumatic Stress Disorder (PTSD). This daily life with routine earthquakes is referred to as the “new normal,” and this type of life, plagued by the fear of aftershock, is becoming their standard.

After the earthquake in September of 2010, the New Zealand government newly appointed a minister responsible for handling earthquakes and passed the Canterbury Earthquake Recovery Act 2010. The government also announced that the Canterbury Earthquake Recovery Foundation was going to be established using donations from the government and private financial institutions. The government donated 500 million dollars^{*4}. As support from the government for the survivors, an across-the-board allowance of 1000 dollars was supplied to the families that temporarily had to evacuate due to the disaster, and a prescribed compensation for business suspension was given to employees who had to stop working.

After the earthquake occurred in February of 2011, the government established CERA for the reconstruction of Christchurch on March 29th. (See Photo 3.) After the establishment of CERA, the draft of the “Reconstruction strategy” was published in September 10th of the same year. It included a widely used key phrase for the reconstruction of the affected area, “Building Back Better,” that became popular after the 2004 Indian Ocean earthquake and tsunami. However, the alliance between CERA and the City Hall seems to be insufficient. Though the city of Christchurch deployed a campaign titled “Share an Idea” for 6 weeks, starting on May 14th of 2011, and collected over 100,000 opinions from citizens, it was unclear as to whether the reconstruction plan had applied those opinions, nor were there official accounts regarding it when CERA’s Christchurch Central Development Unit (CCDU) published the blueprint of this plan in December of 2012. This ended up bearing complaints from the citizens [Otani 2014a].

The objective of CCDU’s reconstruction plan was to retrieve city functions to the destroyed CBD, but what became clearer in 2012 was that the city was transforming, through the plan, to a city that was very different from what it used to be. They decided upon demolishing most of the buildings or facilities in the east part of the city and the CBD, where the damage was more severe, which entailed the erasure of people’s tangible memories—especially those of senior citizens. Because approximately 10,000 houses, mostly around the eastern side of the city, were

^{*3} During my stay at University of Canterbury as a visiting professor in July to August of 2013, aftershocks of Magnitude 3 or 4 were intermittently occurring. Additionally, the earthquake on July 21st of the same year happened in Wellington with a Magnitude of 6.5, covered the 1st page in the *New York Times*, but it was buried under the election reports in Japan. Wellington experienced another large M6.5 earthquake on August 16th of the same year, which caused the growing tension for necessity of proactive measure for presumably happening sooner in this capital city.

^{*4} Unless otherwise stated, “dollar” refers to the New Zealand dollar. (The equivalent in Yen for 1 NZ dollar was approximately 70 yen in 2011.)

TABLE 9-1. Categories of the state of damage by CERA

Red Zone	Most seriously damaged, without any hope of resolution regarding the problem of foundations even when civil engineering work is applied, and not suitable for living on. For homeowners who are inside of this designated zone, the government will purchase damaged houses for the purpose of encouraging residents to move out for disaster prevention, and provide support for relocation destination services, etc.
Orange Zone	Areas needing survey and analysis for the reconstruction plan
White Zone	Blank areas for the reconstruction plan (area without residential buildings, etc.)
Green Zone	Area with relatively less damage, encouraged for reconstruction with new building standards. Based on the severity, this area is subcategorized as TC1 (almost no future damage on land by liquefaction), TC2 (ground reinforcement against liquefaction damage is needed and building after the reinforcement is possible), or TC3 (serious damage by liquefaction after earthquake is possible in the future)

designated as part of the Red Zone*⁵—an area unsuitable for living (Table 9-1)—and were bought by the government, the residents were forced to leave their places.

Though this earthquake seems not to be comparable to ones in Japan or China if one looks only at the death tolls, the social effects are enormous. Most of the city's CBD was designated as part of the Red Zone because of the damage, and the degree of the devastation was so dire that it was designated as a no-trespassing area for 2 years since the onset of the earthquake in February of 2011. There was a much bigger impact to regional society such as liquefaction damage, consecutive aftershocks, and impact to the regional economic activity*⁶ due to the damage to the city centre which included the collapse of the area's iconic symbol, the Christchurch cathedral. When considering all of these factors, it can be said that the impact cannot be measured solely by the death tolls

⁵ Right after the onset of the earthquake in September of 2010, the city of Christchurch started conducting hazard judgements for houses, and CERA categorized the affected areas depending on the state of damage. Homes and land which would be difficult to fix were designated as part of the Red Zone, and applied to the policy of purchase by the government. This made the government have to choose between the options of buying both the houses and land or buying only the land and fixing or rebuilding the houses funded by private insurance and the Earthquake Commission (EQC) [Takeda 2014]. At the end of the day, the residents in the Red Zone had no other choice but to move out of the area anyway. Since TC3 of the Green Zone had a ground problem and TC2 needed reinforcement of the ground, various negotiations have taken place. The result has not yet been decided upon [Campbell 2014]. There are some areas which are designated as different zones on each side separated by just one road that divides residents' destinies. At the point when CERA'S investigation finished at the end of 2012, 630 hectares of land with over 8000 houses fell under the Red Zone [The Press 2013: 46]. The government is purchasing the houses in the Red Zone at prices before the disaster, based on land price investigation in 2006. The total costs exceed 1 billion NZ dollars [The Press 2013: 4]. Although the majority of opinions said that the lands were purchased at satisfactory prices, in reality, individual issues remained such as what to do for the calculation of home extensions that were being built between the time of assessment and the onset of the disaster. Furthermore, complicated issues between the EQC and the side of insurance are present. Miles [2012] introduces the examples along with people's complaints.

⁶ 5700 businesses and 51000 employments at the city's CBD were estimated to be lost due to the earthquake in February of 2011 [The Press 2013: 237].

This site survey taken at this affected area was conducted in 2013, which was 2 years after the earthquake. Despite the fact that the news reported on the memorial ceremony for the victims after the passing of the first year, the state of the disaster at the site was not broadcasted in Japan so it was difficult to know the precise status of the site. The site survey revealed much more of an impact from the earthquake than I could have imagined. What people lost and what they suffered was severe, which solidified my suspicions that these losses would be staying with them for years.

1.2 Demographic shift after the disaster

After the onset of the earthquake, emergency aid members in front of collapsed buildings were directing people to leave the site using megaphones, because stragglers would merely be hindering aid activities. Priority was given to earthquake recovery and securing safety, a policy encouraging people to leave the affected areas came into effect, and suffering residents were offered bargain priced airfare from Air New Zealand^{*7}. As a result of this, many people left the site and ended up becoming internally displaced persons (IDP)^{*8}. The Japanese find this policy to be very distinctive, because they normally take it for granted that survivors will remain in their affected area as they are moved from shelters to temporary housing, and that these survivors will eventually go back to their original houses to reconstruct their lives. The New Zealand approach seems almost to be a policy geared towards man-made disasters, such as nuclear power plant accidents, rather than one for natural disasters.

Within those who had lost their homes, some of them decided to move out of Christchurch temporarily or for good. Some others could not bear the continuous aftershocks while living on liquefied ground without water or bathrooms wound up relocating themselves. Quite a few people who lost their workplaces or jobs moved to other cities such as Auckland or Wellington, or migrated to other countries such as Australia where they could find jobs^{*9}. However, there is no nuance of sadness to this migration. New Zealand can be said to be a country with high population mobility, and a society which forms networks beyond regional boundaries among citizens. To the question, “Do you have any family members or close friends who have directly experienced or had

^{*7} A rescue brigade arriving at the airport from Japan amid a state of chaos wherein many citizens were leaving the city touched the hearts of and spurred gratitude among people resulting in it being greeted with overwhelming applause. The Japanese brigade primarily engaged in rescue activity at the CTV building where most of the Japanese students’ casualties originated, before returning to Japan upon the onset of the 2011 Tohoku earthquake on March 11th. This resulted in a rescue brigade from New Zealand heading to Japan this time.

^{*8} The concept of the internally displaced persons (IDP) includes evacuating survivors in the east part of Japan due to the nuclear power plant accident.

^{*9} There has been a report that not only general residents but also nursing home residents were forced to move out. The earthquake deprived approximately 600 individuals in nursing homes in the city of their residences. Those residents were transferred to other facilities all around New Zealand on the same day or the next morning. More than a few cases arose where people transferred without being able to contact their families for confirmation on the day of the transfer. Some senior citizens went back to Christchurch after the confusion subsided, but some decided not to go back due to the continuing aftershocks. The aging of the population as well as depopulation are considered problematic issues in Japan, and New Zealand is facing an aging society as well. Today, the population is concentrated in Auckland in North Island, and depopulation in South Island is progressing.

an impact from the earthquake in 2011?” 90% of the New Zealand respondents answered “Yes” [Keeling et al. 2014]. Looking at this from another angle, it can be said that New Zealand is taking advantage of its high social mobility to deal with earthquakes without using the temporary housing that one can see in Japan^{*10}. This point will be discussed in the following section.

The eastern part of Christchurch, which was impacted comparatively more heavily than other areas, was an area with a relatively lower socio-economic status (SES); the earthquake revealed the socioeconomic gap between regions in Christchurch societies even further. This gap caused the difference in speed of lifestyle rehabilitation and reconstruction between regions,^{*11} which continued as a non-daily influence in the school lives of students after the disaster.

However, the mobility of people in affected areas is not dominated by the leaving survivors. Some of the population moving in are those coming in in order to remove collapsed debris or for rehabilitation. For the purpose of replenishing labourers at construction sites as rehabilitation construction progresses, a number of migrant labourers from Australia, Ireland, and the Philippines has increased in addition to labourers from farmland in New Zealand^{*12}.

2. Self-help centrism involved in disaster insurance system

2.1 Absence of temporary housing

When I visited Christchurch to inspect the sites in November of 2011, I realized that there was an absence of temporary housing like those that were seen in affected areas in Japan or during the 2008 Sichuan earthquake in China. There were large-scale temporary buildings for schools, but none for the purpose of living. Throughout the course of the hearing with local university researchers on the subject of earthquakes, nobody knew of any location using temporary housing. Furthermore, in the survey which started on July of 2013, it was discovered that the existence of temporary housing is not generally known. It seems to be that the media does not provide coverage on it. People unanimously replied that “there is no temporary housing,” or that “those who lost their homes relied on and evacuated to their relatives’ or friends’ places.” Responders included university instructors who had moved several times, some even up to 7 times, after

^{*10} In volume 1 of this series [Yamamoto 2014], Yamamoto discusses high mobility societies.

^{*11} As a part of my hearing, I heard that some relatively affluent residents of regions in the west refer to people from the east after the earthquake in terms such as: “relocation of the eastern people means that they bring their social problems with them,” or “I often run into someone I don’t want to see in our local supermarkets.” Some original residents in Kaiapoi, which is a northern suburb, refer to those who evaded the high-priced city housing area and relocated to the relatively low-priced housing area from the eastern Christchurch disaster area using discriminatory and shocking expressions, such as “the undesirable.” There was one indignantly recounted account from the south east area that said: “this neighbourhood totally became rough after the disaster. Because the guys from the east commit crimes, I can’t park my car on the streets. I don’t understand them at all.” (Interview, August 2014.)

^{*12} Though there was some gossip regarding deterioration of public security because of this, there is no data that prove that migrant labours from overseas correspond with the increase in crime. In August of 2014, a newspaper published resolutions, along with a large photograph, of a Philippine man working away from his family saying that he wanted to bring his wife and children to New Zealand to give his children a New Zealand education.

directly experiencing the disaster. Someone shared an account of 1000 motor homes which were placed in a remote, inconvenient location as an offering of temporary housing, that only one person used. Ultimately, these homes were withdrawn.

However, in a monthly free paper issued by CERA (the CERA Greater Christchurch Recovery Update), there was an article regarding residents living in temporary housing in Linwood park along with pictures; this means that some temporary homes were constructed. Next, during the hearings at the Ministry of Social Development (MSD), I learned that there were 4 temporary housing sites in the aforementioned park. When I visited the housing sites, led by the personnel of MSD, I found that the homes had been built in a forested park which was so huge that even the MSD personnel got lost in it. Each site offered 20 to 40 homes, which was relatively small in scale, but each home was much more spacious than those in Japan. They were one-story 2 or 3 bedroom prefab houses with a large kitchen and a spacious bathroom. Some of them had 4 bedrooms. They were individual houses and walls were not shared with homes next door. Additionally, pets were allowed in all households^{*13}. Most of them were unfurnished, so families needed to move in with their own furniture. Some were prepared with furnishing, however, so that people could easily move in with their furniture still kept in warehouses.

Another fact that indicates that New Zealand's temporary housing is different from that of Japan's is that the average length of stay in New Zealand's temporary housing is 42 days. Use of the housing is also not free of charge. The rent fee, which is calculated from the market price, must be paid (in reality, however, insurance covers this cost). The rent fee is as shown in Table 9-2. For additional information, temporary housing in Christchurch was said to be built in reference of the model of Ash Wednesday bushfires^{*14}.

2.2 Enhancement of communities' resilience through public assistance

The Earthquake Support Coordination Service (ESCS), which was established by the Ministry of Social Development (MSD) after the disaster in September of 2010, has cooperated with

^{*13} When the Great Hanshin-Awaji Earthquake broke out, pets at temporary housing or disaster recovery housing became an issue. They caused skirmishes among neighbours due to the fact that they were kept secretly despite them not being allowed, that they made noise, and that they smeared public spaces including elevators with their excrement. On the other hand, having pets have been reported to work as pet therapy: touching them can be a relief for those who are retreating into themselves, walking with them can help people break out of a tendency towards a shut-in lifestyle, talking to them can induce greetings and conversations between people, and keeping them can be opportunities to build bridges between people [Otani 2006]. When people were placed under harsh conditions amid the Tohoku earthquake, the embassy of Japan in New Zealand (Wellington) became perplexed when they received so many animal protection inquiries from New Zealanders regarding the conditions of pets, such as whether they had been left behind or if they were hungry or in bad condition. In New Zealand society, living with pets or securing such environments for them are perfectly normal, and the semi-common sense ideas held by Japanese people such as "pets cannot be brought to shelters" or "saving human lives precedes lives of pets" may not be acceptable. Volume 1 of Yamamoto [2014] discusses an individual who went back to save pets and was swept up by a tsunami after the Tohoku earthquake.

^{*14} Based on the interview with Mr. David Griffiths, the CETAS Manager, and Ms. Tania Ohlson, Quality Adviser (August 14th, 2013).

TABLE 9-2. Rent for temporary housing

Type of residence	Rent
Individual house with 2 bedrooms	287 NZ dollars (22960 yen)/week
Furnished individual house with 2 bedrooms	355 NZ dollars (28400 yen)/week
Individual or townhouse with 3 bedrooms	353 NZ dollars (28240 yen)/week
Individual house with 4 bedrooms	439 NZ dollars (35120 yen)/week

Table created based on *The Press*, September 18th, 2013 (page A8) “Quake homes bring relief”

insurance to conduct an assistance program^{*15} for rehabilitating lives by rebuilding houses, etc.^{*16} Specifically speaking, there are 5 activities: the help line (toll-free phone calls), temporary housing, coordinators for providing assistance to affected peoples, support centre for individuals owning property in the Red Zone (the Avondale Earthquake Assistance Centre), and the Community resilience team [Takeda 2014]. The ESCS has provided information on earthquake measures and introduced residents who have never dealt with earthquake insurance and other issues new to them because of the disaster to contact representatives according to their current situation. In addition to the help-lines, NGO personnel, social workers, and community development experts with their respective skills were present as ESCS support coordinators for survivors, and were engaged in activities as service guides with respect to housing necessary for survivors and to rehabilitation of the survivors’ lives. The survivors were able to meet with those guides wherever they wished, either at their temporary home or in the MSD office. There were 75 coordinators at most [CERA 2012: 4]^{*17}, and addressing issues one-on-one (separately) was originally the main course of action. However, the administration raised the issue that coordinators tended to take close care of survivors for a long period of time, which made survivors dependent on support. Currently, support activities are shifting to a one-to-community style.

2.3 New Zealand’s high-coverage insurance (globally exceptional)

There is a system known as the reinsurance system, which is insurance for the sake of insurance companies. Let’s compare the data regarding global natural disasters which was

^{*15} Though this program is drawn up as measures post-disaster, with a time limit of until June, 2014 (the MSD personnel was saying at the time of this interview, in August of 2013, that this limit is a reasonable time for the government to transfer jobs that insurance companies should be handling over to them, and the government should not be handling these jobs indefinitely), it is still continuing even after July.

^{*16} Considering the necessity of mid-to-long-term assistance, CERA is taking several measures for the rehabilitation of survivors. During the course of decision-making for the polity and the program to be implemented, the measure taken for a forest fire disaster which occurred in Victoria, Australia in 2009 was referred to as the model in terms of rehabilitation of survivors’ lives. (Based on interviews with Mr. Denise Kidd, general manager for CERA’s community resilience and social and cultural reconstruction program, and Ms. Jane Morgan of the same program. August 6th, 2013 and August 19th, 2014).

^{*17} As of August 2013, 40 coordinators (based on the interview with Ms. Maria McEntyre, Senior Regional Relationship Manager, Family & Community Services at ESCS. August 8th, 2013)

TABLE 9-3. Amount of loss compensated by insurance for global natural disasters (1980-2012), Top 10

Date Name	Affected area	Amount of loss	Amount compensated by insurance	Death toll
		Unit: Million USD		
2011.3.11 Tohoku earthquake	Japan: Iwate, Miyagi, Fuku- shima, etc.	210,000	40,000	15,840
1994.1.17 Northridge earthquake	US: California	44,000	15,300	61
2011.2.22 Canterbury earthquake	New Zealand: Canterbury	16,000	13,000	185
2010.2.27 Chile earthquake	Central part of Chile	30,000	8,000	520
2010.9.4 Darfield earthquake	New Zealand: Canterbury	65,000	5,000	
1995.1.17 Great Hanshin-Awaji Earthquake	Japan: Hyogo, etc.	100,000	3,000	6,430
2012.5.29/6.3 Northern Italy earthquakes	Northern Italy	16,000	1,600	18
2004.12. 26 Indian Ocean earthquake and tsunami	Sri Lanka, Indonesia, Thailand, India, Bangladesh, Myanmar, Maldives, Malaysia	11,200	1,000	220,000
1989.10.17 Loma Prieta earthquake	US: California	10,000	900	68
2011.6.13 Christchurch earthquake	New Zealand: Canterbury	2,000	800	1

Drew based on Munich RE, NatCastSERVICE (March, 2013)

published by Munich RE, a major reinsurance company, in terms of death tolls, the amount of loss, and the amount compensated by insurance [Otani 2014b]. The numbers of deaths in descending order are 222,570 people in the 2010 Haiti earthquake, and then approximately 220,000 people in the 2004 Indian Ocean earthquake and tsunami. The 185 casualties of the Canterbury earthquake (later added one, 186 in total) is a death toll that is almost incomparably small to the ones mentioned above. In terms of the amount of loss, the Tohoku earthquake had the largest with 210 billion US dollars, followed by the 100 billion US dollars lost in the Great Hanshin-Awaji Earthquake. The earthquake at Christchurch, a city with a population of 350 thousand, is ranked 7th on this list in terms of losses, at 16 billion US dollars. Looking at the figures of the amount compensated by insurance (Table 9-3), the earthquake in New Zealand in February of 2011 is ranked 3rd, with 13 billion US dollars. In the case of the Tohoku earthquake,

the amount compensated by insurance out of the loss of 210 billion US dollars was only 40 billion US dollars, while in the case of the Canterbury earthquake in February of 2011, 13 billion US dollars out of 16 billion US dollars were compensated by insurance. The earthquake in September of 2010 with no deaths is ranked 5th in the compensation amount for earthquakes. Furthermore, the earthquake in June of 2011 is ranked 10th, which shows that the series of earthquakes which occurred in New Zealand, even when divided into 3 separate events, are all individually ranked within the global top 10.

One cannot determine how badly an area was affected by natural disasters from the amount of compensation from insurance alone. The number of deaths and the amount of loss in natural disaster are never proportional to the amount of damage compensation provided by insurance. The number of amount paid among countries are not the same because of the existence of insurance systems, the insurance rates (setting of insured amount), and differences in targets for coverage. In general, in developing countries, even if the casualty count is high, insurance compensation for the loss is next to nothing. However, in the case of the Canterbury earthquake in New Zealand, despite the casualty count being low, the amount of loss and even the amount compensated by insurance were humongous compared to the world average. Insurance for large-scale natural disasters is compensated not only by the insurance budget targeting only the affected county, but also from insurance funds which are collected from all over the world through reinsurance companies, if the insurance system is well maintained.

New Zealand depends on the principle of “self-help” centrism (disaster insurance system), which is a distinctive characteristic of New Zealand’s reconstruction measures. This leads to the “absence of temporary housing,” which makes the supporting system regarding housing different from the nations that prefer to provide a system based on “public assistance” centrism that offers temporary housing, the way Japan does. The reason why the government does not provide support in the form of construction and provision of temporary housing is because there is a system where the cost for fixing houses and buildings is paid through the Earthquake commission (EQC^{*18}), a governmental organization, for those who purchased disaster insurance.

The EQC, which is an organization for rescuing those who are suffering from natural disasters such as earthquakes, tsunamis and floods, was not established for this specific earthquake; in fact, it has about 70 years of history. New Zealand’s public earthquake insurance was started in 1945 on the groundwork of the Earthquake and War Damage Fund, which was the predecessor of the EQC, upon the opportunity of an earthquake which occurred on 1942 in the capital city of Wellington. In 1993, a large revision of the country’s law took place, and the EQC became a

^{*18} The EQC conducts not only fund management for natural disaster reconstruction, but also investigation and education on natural disasters as well as prevention measures and subsidy grants towards research. It also invests in the GeoNet project, which is New Zealand’s earthquake observation project. In the long period of frequent aftershocks after 2010, searching for information such as seismic intensity for every aftershock using the GeoNet website (<http://www.geonet.org.nz/>) is becoming routinized.

corporate entity for which the government owned the entirety of the aforementioned funds^{*19}. The structure of this insurance is different from that in Japan. The insurance provided by the EQC is called the EQ Cover, which is mandatory and automatically added to fire insurance when purchasing fire insurance from a private insurance company. Thus, the incidental rate is as high as 90%. Those who buy houses purchase insurance that combines fire and disaster insurance from private insurance companies. In order to make a loan with a bank, purchasing insurance is a prerequisite. Entering into earthquake insurance separately is not necessary as it is in Japan, and premiums are less expensive than those in Japan. Furthermore, unlike the Japanese earthquake insurance system, the targets for this insurance includes land in addition to buildings and household goods. However, the EQC coverage has a cap (for example, in case of a house, 100 thousand dollars), and the amount exceeded will be compensated by the insurance companies. When a house is destroyed and is in unliveable conditions, there will be insufficient rebuilding expenses, which must be covered by private insurance. As can be seen from the above, housing insurance compensation works in combination with the governmental EQC as well as private insurance companies.

With that said, this system is by no means impeccable. There are complicated issues between the EQC and insurance companies. The issue drawing the most concern from survivors is that the system exists, but procedures takes too much time and keep them waiting indefinitely. In cases like the Canterbury earthquake, when the number of claims is vast^{*20} or the damage from the aftershocks is still ongoing, delays in the assessment process pile up^{*21}. On top of that, even after the EQC finishes the assessment, some people are forced to wait for an additionally long period of time during negotiations with insurance companies. Furthermore, during the stages of determining specific methods for compensation, such as commissioning work to the insurance company's contracted repair shop, or receiving a certain amount of compensation, people are required to wait in whatever stages for compensation, which multiplies survivors' stress. In New Zealand, whose population is not large, the number of companies that conduct repairs and construction is limited. Some survivors regarded the monopolization of these limited companies with scepticism.

^{*19} The EQC accumulated insurance premiums as natural disaster funds, and effectively managed them for foreign stocks (approx. 30%), government bonds (approx. 60%) and cash and deposits (approx. 10%) under monitoring from the country; this resulted in 5.6 billion NZ dollars as the balance of funds prior to the Canterbury earthquake in 2010. Additionally, reviews on premiums in New Zealand have advanced due to earthquakes occurring on the same year and afterwards. It is estimated as a 30% increase [Miles 2012].

^{*20} Even only looking at damage from the earthquake in September of 2010, the reported number of claims which had completed assessment by January 5th of 2011 (after the earthquake and before the earthquake in February of 2011) was only 73,000, and those which had been paid for repair costs were merely 24,000 [Kimura-Steven 2012: 91].

^{*21} The EQC had accepted more than 459,000 claims, and just less than a quarter of them were processed and resolved by the end of 2012. They say that the equivalent of 26% of land, 31% of buildings, and 81% of contents were resolved [The Press 2013: 21].

There are also generational problems. For example, many individuals who are 30 years or younger do not apply for insurance because 90% of this generation do not own their own houses [The Press 2013: 21]. On the other hand, senior citizens struggle from the bureaucratic processing method regarding insurance claims. It might be reasonable to say that the younger generation, which largely does not own property, is more mobile. New Zealand was an aging society since before the earthquake. By the year just past 2030, which is 20 years in the future, more than one half of the population of Christchurch is estimated to be 65 years old or older if the younger generation keeps up its trend of accelerative withdrawal from the city of Christchurch, as they have done after the earthquake [The Press 2013: 22].

2.4 Cooperation between government and civic society

Up to this point, we have discussed New Zealand's system of self-help centrism. Now, let's move onto New Zealand's public assistance. Right after the earthquake, the Ministry of Civil Defence Emergency Management (CDEM) took the lead to bring governmental organizations and private institutions together to provide swift and prudent rescue activities [Kimura-Steven 2012]. The private institutions include the Red Cross, the Salvation Army, and World Vision. The government cooperated with the Red Cross to establish a foundation, and assisted the survivors whose houses or rented houses were damaged and lived in shelters by providing them with rent up to a pre-set amount. The Student Volunteer Army (SVA) [Otani 2014a, 2014b] [Nanami 2012] and the Farmers Army (FA), which provided time and labour instead of monetary support, were organized, and went to the affected areas by tractor in efforts to eliminate mud generated by liquefaction, etc. After the earthquake, aside from the military brigades, the Salvation Army, Christian groups conducting activities in social welfare, medical and education fields, and other "Armies" like the SVA and FA were engaging actively as well. These activities were greatly appreciated by the survivors. New Zealand's national characteristic, which is for people to get together as one to overcome difficulties, was reported after the disaster [Kimura-Steven 2012], and it resembled the nature of earthquake disaster reconstruction in Japan in the past [Otani 2014a, 2014b].

The SVA played a role in liquefaction cleaning at site, safety ascertainment, delivering backup supplies, and acting as liaison. Their activities encouraged many survivors and were covered by the media which resulted in praise and acclaim from all over. The members of the SVA were originally student volunteers who gathered through Facebook, and the group was started and formed by a student by the name of Sam Johnson, when the first earthquake hit in September of 2010. At the time of the first earthquake, actual damage to the residents was limited, and so was the activity of the SVA. However, the organization at the site and experience in conducting activities served as a rehearsal, and which likely contributed to their ability to provide swift actions for the earthquake on February 22nd of 2011. Social connections and volunteer activities have now become normalized in New Zealand, but the year 2011 can be noted as the starting

year of student volunteers (cf. Page 237 of the Japanese original book, Chapter 7: 木村周平「トルコ・コジェエリ地震の経験の継承—私の声が聞こえる人はいるか?」(Kimura, Shuhei. (2015). Inheritance of experiences from the 1999 Isumit (Kocaeli il) Earthquake, Turkey.).

3. Hope for reconstruction—Art

3.1 Reconstruction using art—Experimental city of memories connecting affected areas using art

After the disaster, more and more tourists groups from Japan landed on the Christchurch airport to bypass the city area and head directly to Lake Tekapo, a scenic spot for stars. According to statistics by business type, after the earthquake, employment in the tourism and hospitality sectors in Canterbury was devastated the most, at a decrease of 37% compared to the year before. The group of churches, including the iconic cathedral which had been the then-main tourist attraction of the city, had collapsed. The town church that Japanese couples visited for their honeymoon during the course of holding their wedding also collapsed, and the wedding business was discontinued. Furthermore, the gardens in one of Christchurch's tourism factors, Garden City, suffered from liquefaction. The examples in Christchurch are not examples of establishing disaster tourism in affected areas, which is discussed in Chapter 10 of this book by Yamashita (山下晋司「復興ツーリズム—震災後の新しい観光スタイル」, (Yamashita, Shinji. (2016). Disaster Tourism), but are rather meant to explain that an international cultural city for tourism was ravaged by a disaster. Under the circumstances of repeated earthquakes and continuous aftershocks, reconstruction didn't seem to be based with tourism in mind; after 3 years passed, however, Christchurch began to show efforts which aimed towards “reconstruction as an international cultural city for tourism” for the attraction of tourists [CERA 2014b: 8].

3.2 Temporary public art in affected areas

What uniquely characterizes the area of Christchurch city despite the stalling reconstruction efforts is the city's “temporary art.” Art has also been created as temporary exhibitions. They are all over the city. In Christchurch, art galleries also collapsed due to the disaster, and artists lost their spaces for activity such as studios in addition to losing places to live. Art is not only psychologically encouraging to people in the area, but also provides people with opportunities to gather, which invigorates the city as a revenue source of tourism. According to the Canterbury Wellbeing Index (2014), which uses a multitude of indexes to track the reconstruction process since the earthquake, 90% of the residents of Christchurch replied that art played a vital role in the rehabilitation of the city.

As part of a project called Container Shop Re: START, a colourful temporary shopping area was established in October of 2011 amidst the debris of the CBD. (See Photos 17, 18.) Twenty seven container-made shops, banks, mobile phone stores, and cafes were established as a trial for starting an urban district, and this later became a tourist spot in the affected area. In February

of 2013, an earthquake disaster museum called “The Quake City” was established (photo on page 313 in the original Japanese book. See Photo 15.) on the corner of Re: START. Here, volunteer records and tools used by university students, along with knowledge regarding earthquakes, explanation of the liquefaction mechanism, and replica of mobile toilets installed in the back yard of a collapsed residence are exhibited. A large space was spared for the exhibition^{*22} of many voices focused on individual survivors as well.

Figure 9-1: Container-made temporary shopping area “Re: START” is an oasis for people
(See Photos 17, 18.)

Along the street of Cashel Mall in the CBD, a reconstruction project called “Re: START” was developed and started operations in October of 2011. This is also referred to as a “pop up mall” or a “container mall.” Shops made out of colourfully painted and piled-up freight containers are neatly lined up. They are nicely modified with large windows to look stylish. Since this instalment was built on the premise of rebuilding permanent buildings on the site, this project was supposed to end in April of 2014. However, it is still continuing after the prescribed end date. The shop on the far left of the bottom picture is the Scorpio books store, which is beloved by the townspeople in a society where sales of book are declining and where book stores are becoming a thing of the past in New Zealand (Photo taken on November, 2011).

Public art, namely temporary art exhibited on vacant lots at affected areas, attracts people. Visiting the collapsed central section of the city is usually depressing, but some residents from the western side say that they go to the badly affected city with a hope of finding new works of art there. Even temporary art has the power to connect people and activities regardless of time and location, as Kimura discusses (Chapter 7). It becomes the catalyst that heightens motivation towards restoration and reconstruction of the site, and results in cultivation of resilience (the power to restore and rehabilitate). Events also lead to revitalization, and combat the fading of people’s memories. A good example of this is the Blue Pallet Summer Pavilion (photo in the margin of page 315 in the original Japanese book. See Photo 22.).

Walking to the northeast from Re: START, the temporary art space built by local artists such as the Gap Filler^{*23} (See Photo 19.) Blue Pallet Summer Pavilion is the main attention-drawer. Three thousand blue wooden pallets were assembled and utilized for exhibiting art. The plaza in

^{*22} This exhibition emphasizes the diversity of disaster experiences from person to person. However, only Caucasians faces were there, though I was looking for Maoris and migrants from places other than Europe in the photos (though the affected area was a Caucasian-dominated region).

^{*23} An initiative called Gap Filler, as its name suggests: Gap (vacant lots after demolition of damaged buildings due to the Christchurch earthquake) Fill (reinvigorate them through creative events). This pavilion was originally installed with a time limit from December of 2012 to April of 2014. Refer to the website below.

http://jdunz.com/newzealand/christchurch/gap_filler.html

<http://www.gapfiller.org.nz>

the front serves as a concert venue on weekends, or a place for people to get together. This space was installed through volunteer activities by artists and other individuals. Concerts at night became a beacon of hope for reenergizing a city that had lost its light from disaster. It was able to hold 200 to 300 people. Although it was popular, and news articles on affected areas were published introducing the area as an icon of hope for reconstruction, it was disassembled on August of 2014. Some say that this was regrettable amid the reconstruction delay of other locations. However, because the area started as a temporary facility with a set time limit, the disassembly should be understood as a part of the process for building something permanent.

Three years after the disaster, as the demolition of buildings advanced in the badly affected city area, vacant lots became more prominent and even gave the impression of that the reconstruction effort was stagnant. The Tree Houses for Swamp Dwellers were installed on Art Central (a vacant lot in an affected area) in September of 2013 (photo on the bottom right of page 316 in the original Japanese book. See Photo 20.). Since Christchurch is a city that was constructed over a swamp area, where the Maoris chose not to live, the construction of this tree house symbolized its purpose for swamp dwellers that are analogous to citizens of Christchurch. Radially arranged sticks on the top of wooden tree houses emit dim coloured lights which gradually change from green to blue to purple to red. These lights look especially beautiful at night.

Temporary public art, which can turn places into tourist spots, was placed not only in the largely damaged CBD of Christchurch city, but also in other badly affected suburbs such as Kaiapoi and Lyttelton. The entire affected areas including Christchurch city and its adjacent towns act as an experimental city of memories which are linked by art. Lyttelton, a southern suburb of Christchurch, is a port city where English people first immigrated and where trading boats come and go. It is one of the most heavily affected areas. In a vacant lot, made after the collapsing of a building, is a work of mosaic art depicting figures of people holding hands. This artwork was made by primary school students, using dishes and vases from collapsed houses. Benches were also installed so that many people could gather and sit (refer to the front page of this chapter (See Photo 2.), as well as page 325 in the original Japanese book. See Photo 29.). There are some people who visit from Christchurch and other outskirts just to see this artwork. The idea of “connection” seems to be weaved into this piece of art, using held hands as its way to send a message. This work of art can also be an appeal to connect and link affected areas by art in order to remind others that this small town of Lyttelton, should not be left behind even as reconstruction progresses in Christchurch.

In residential areas, fences have been decorated by artificial flowers, and colourfully decorated temporary benches have been put in vacant lots between shops in shopping areas. (See Photo 4.) Additionally, offering messages of hope for reconstruction as well as flowers have become allowed. This effort is to prevent crimes and to retrieve the city’s healthy and constructive atmosphere towards reconstruction through art. In the Red Zone, we were able to spot some

crime scenes where someone had conducted robbery or written graffiti using spray cans on wasteland, abandoned houses, and houses that had to be abandoned due to the disaster. Both the MSD member who conducted the inspection with me and I felt deeply emotionally hurt by this. On the window of an uninhabitable home, a message that said “Please be gentle, I was once a Home ♡” had been posted. (See Photo 21.)

Attempts towards reconstruction through art include music and stage plays, not to mention artistic objects as well as exhibitions or instalments. Places that people could dress up and go to enjoy such works of art were eliminated due to the disaster. This contributed greatly to the depressing atmosphere which hung over the city. Cancelling events such as concerts and art festivals drove feelings of those who survived even further to the ground. With this as the background, the construction of the Christchurch municipal music centre and symphony hall was decided upon, through donations from the government and the Christchurch city that would cover the total construction cost of 12 million and 500 thousand dollars. Prior to construction commencement at the end of 2014, a picture of a ballerina was posted on the wall of the affected building on the planned construction site in June of the same year (See Photo 22.) [CERA 2014a: 4]. This was considered the rebuilding and relocation of the Isaac Theatre Royal, and as a part of the reconstruction of the city as an international tourist city.

The temporary cathedral designed by a Japanese architect, Shigeru Ban, which was built after the collapse of Christchurch’s iconic Anglican cathedral, can also be considered as a work of art. (Photo on page 322 in the original Japanese book. See Photo 26.). (The cathedral soon started to be called ‘transitional cathedral’ than ‘temporary cathedral’ as follows. This may become half-permanent.) The collapse of the Anglican cathedral also caused definitive psychological damage that indicated the collapse of the city. (See Photo 6.) Upon the commencement of reconstruction efforts, there were many discussions on regarding the hope for rebuilding the cathedral in its original stone-made form, but opinions were divided with respect to such points as whether this was possible in terms of technique as well as availability of material, in addition to how such as huge budget could be managed. The cathedral had been situated right in the middle of the CBD that had long been restricted for access after the disaster. On June 30th of 2013, when the restriction was dissolved and people were able to inspect the site more closely, more opinions of those who were became gradually convinced that restoration to the cathedral’s original state was impossible began to be heard.

Mr. Ban’s cathedral, which is made of cardboard tubes, was completed as the original cathedral’s successor in August of 2013^{*24}. It is located diagonally across from the clearing of

^{*24}Cardboard tubes that were cheaply procured and strong enough to serve as construction material were used. Mr. Ban used these tubes in other disaster affected areas as well. The Takatori church, which is a Catholic church, was made of cardboard tubes after the Great Hanshin-Awaji Earthquake. This church was eventually sent to an affected area in Taiwan. This location attracts people as a paper dome aiming for the resurrection of the affected area’s community, and tourists are actually visiting it in reality. (See Photo 26.)

the CTV building, where many people were caught in the disaster. Behind the transitional cathedral, 185 white chairs for the victims of the disaster were placed (refer to the frontispiece on page ii in the original Japanese book. See Photo 1.). Despite some critical opinions that said that the new cathedral was not a suitable replacement and yearned for the old, historic stone-built cathedral, as the Japanese children's song "the hill where I would be chasing rabbits..." which is a part of "Furusato (hometown)" goes, this feeling is merely nostalgia for the things that cannot be brought back [Otani 2006: 193]. Little by little the cardboard tube cathedral garnered acclaim from those who recognized that they could now get together and continue their worship, and establish a holy place for their hearts to rest. Even though the tubes in the cathedral are made out of cardboard, its functionality and effectiveness were acknowledged not only with respect to its low cost, but also its durability and its acoustic efficiency. People became persuaded on the cathedral's design, which generated peacefulness as well as a churchlike atmosphere. This cardboard tube-made cathedral is not referred to as a 'temporary cathedral,' but as a 'transitional' one. It can hold 700 people. Newspaper articles praised its remarkable acoustics when a concert was held there.

On the other hand, colourful fences and memorial boards explaining the history of the area were built in front of the collapsed original cathedral^{*25}, and were artistically decorated using flowers and lawn grass. By August of 2014, the plaza in front of the site saw visitation from groups of elementary school children. It also became a site for people to play games of chess, which became a frequent occurrence in the plaza..

The tourism buses, which have resumed their rounds, stop in front of the vacant lot of the collapsed CTV building where most of the casualties occurred. They stop in front of the memorial 185 chairs to give prayers as well. (See Photo 1.) Disaster tourism provides an opportunity for each tourist to experience the tragedy first-hand. This is also an embodiment of "memories linked through art."

Unlike the badly affected city and eastern areas, the western area, where the damage was minimal, is home to a university and the Riccarton shopping mall. This shopping mall has enjoyed good business even after the disaster. On the mall's wall, messages expressing hopes of recovery by survivors who love Christchurch have been newly displayed.

3.3 Urban planning and art

Christchurch city, whose CBD collapsed devastatingly, has been discussing urban planning for the purpose of its reconstruction. An example that is being used there for reference is Napier, which is located in North Island of New Zealand. After the 1931 Hawkes Bay earthquake (Napier earthquake), Napier reconstructed the entire city, including the newly acquired land which was uplifted due to the earthquake, in the style of Art deco architecture, turned the streetscape into

^{*25} This was the centre of the no-trespassing area after the earthquake; on July 1st, 2013, the restriction was lifted.

an artistic landscape. (See Photo 24.) A museum exhibiting this artistic style of architecture was built, resulting in the city becoming a popular tourist spot. Another popular example of successful urban planning is the one conducted after the 1989 Loma Prieta earthquake. This plan brought the city of San Francisco back as a uniquely attractive city with artistic architecture despite the entire CBD of the city having been fully damaged. The mayor of San Francisco at the time and the architect was interviewed in a special TV program. These can be considered examples of discussion which aim towards “creative reconstruction.” However, during our fact-finding tour in August of 2014, we could hardly say that the reconstruction of the city of Christchurch was progressing in a similar manner as those of the aforementioned cities, which had consistent styles. Amid delayed reconstruction and many remaining vacant lots, many of the newly built buildings in the CBD use modern designs with glass walls, which I felt was unnatural, in light of the fact that the city had just experienced an earthquake.

4. Placing ourselves in Christchurch’s example

For the end of this chapter, I would like to lead into the conclusion by considering what seems unique with respect to New Zealand’s examples as well as what seems to be applicable to reconstruction efforts for someone who is considering reconstruction of affected areas in Japan. In the case of the Christchurch disaster, there were two unique phenomena when compared to other nations: the high coverage of insurance and the absence of “temporary housing.” These aspects are different from such disaster areas in Japan and so forth, which can be considered as examples that indicate the importance of conducting international comparative research at affected areas. Moreover, this chapter introduced and focused on temporary art as a unique undertaking at disaster areas in Christchurch.

Though the New Zealand government is not aggressively constructing temporary housing or offering them in the way the Japanese government does, they are attempting many public support undertakings in different ways for the sake of survivor’s lifestyle rehabilitation. The method of public support through self-help seems to be deeply related to the concept of key phrases such as “social capital” and “resilience”, which are often being used in recent disaster research. (See Chapter 8 of this original Japanese book: 大矢根淳「小さな浜のレジリエンス—東日本大震災・牡鹿半島小湊浜の経験から」(Oyane, Jun. (2015). Resilience in the small fishing village—the experience of Kobuchihama in the Ojika Peninsula, Great East Japan Earthquake and Tsunami).)

There is also something that one can learn from drawing comparisons with New Zealand’s fluid society. The method of utilizing and providing temporary housing in the event of the Canterbury earthquake is utterly different from the lifestyle rehabilitation model, which is based on a procedural flow that moves from “evacuation shelters to temporary housing, and finally to rebuilding original housing,” which was developed with reference to past disasters such as the Great Hanshin-Awaji Earthquake. Contrary to the Japanese “public support”-centric system

(temporary housing provided by spending a colossal sum of funds from public finances), the system in New Zealand is “self-help”-centric (disaster insurance). Additionally, New Zealand provides a hefty amount of public support which isn’t to provide or construct temporary housing, but rather support such as the buying up of land assessed as non-inhabitable by the government at a pre-earthquake market price. New Zealand does not build temporary housing as a method of assistance like the Japanese do, but instead support people through insurance and the provision of ample assistance for lifestyle rehabilitation.

Though New Zealand and Japan have earthquake insurance systems and housing policies which differ from one another, both countries are industrialized countries with long-lasting stagnation in economic growth. They also both face an aging population. That is why it can be said that it is worth learning from each other’s experiences when it comes to considering the ideal reconstruction of the respective countries, regardless of whether or not Japan can imitate New Zealand.

As discussed in section 3, Christchurch is an example of an international tourist cultural city being damaged by disaster. Works of art by surviving artists who were spurred to do something for this situation as survivors and artists have gained more and more opportunities to be seen by others through the form of public art. To use a phrase from this book, nameless artists restored their identities as a “new people” Their works of art acted as powerful catalysts that induced resilience. It can be said that the city gained an opportunity to create art which possess a binding energy between people regardless of time and location. It has created what can be called an “experimental city of memories” that creates connections between people or between people and affected areas by using art. In other words, the city is recreating itself, but not eliminating its past in the process. It is going through trial and error which aims to preserve, in some shape or form, the characteristics and history of the city, as well as the things that people love about it.

Art is creative and imaginative; there is an aspect of it that is independent of the flow of time in the real world. In the process of reconstruction, in which grief in the affected area and the burden of tackling rehabilitation are inevitable, portraying another time or flash-forwards through art has something in common with the idea of “story reconstruction”. (See Chapter 2 of this original Japanese book: 大矢根淳「現場で組み上げられる再生のガバナンス—既定復興を乗り越える実践例から」(Oyane, Jun. (2015) Some practical examples of Governance for rebirth in the disaster-affected areas).) The temporary art in Christchurch has brought about a breath of creative reconstruction in vacant lots in affected areas, despite the art being merely temporary; or, perhaps, they are powerful because they are temporary. People are attracted to temporary art, causing them to gather. These people imagine and create the future of the vast affected area and generate vitality within themselves through the temporary art which is standing or has been draw in the vacant lots. This is the reason why people assert that art plays an important role in the reconstruction of Christchurch, which is an international tourist cultural city.

As discussed previously in the examples of the vacant lot of the CTV building and the 185

memorial chairs, disaster area tourism offers tourists a first-hand experience of grief. Tourists are not invigorated after participating in this type of tourism, but rather, they become depressed. These tours are often a combination of these disaster areas and relaxing sightseeing spots. In the case of Christchurch, securing sightseeing spots where visitors can enjoy the healing effect of Mother Nature, such as the Avon River punting, the botanical gardens, or the beautiful gardens in city area becomes necessary, in addition to Lake Tekapo under the beautiful starry sky or the hot springs in the suburbs. A good, balanced combination of disaster tourism with enjoyable tourism involving cultural experiences such as art or relaxing in nature seems to be a key factor in reconstructing an international tourist city.

Not all affected areas in Japan aim to reconstruct themselves as international tourist cities, but those examples can be an interesting reference when it comes to considering the entirety of Japan, in light of the government having been raising policies such as “regional creation,” and establishing a tourism-oriented country.

References

Japanese

- Otani, Junko 大谷順子. 2006. Jireikenkyu no kakushinteki houhou—Hanshindaishinsai hisai koureisha no gonon to koureika shakai no miraizou, 『事例研究の革新的方法—阪神大震災被災高齢者の五年と高齢化社会の未来像—』 (Innovative methods of case study: Older survivors of the Great Hanshin earthquake five years on and the future model of ageing society) Kyushu University Press 九州大学出版会
- Otani, Junko 大谷順子. 2014a. Nyujirandokoku kantaberii jishin no shakaiteki eikyo ni kansuru kousatsu—Tokuni kyouiku sekutaa wo taisho toshite, 「ニュージーランド国カンタベリー地震の社会的影響に関する一考察—特に教育セクターを対象として—」 (Consideration on social impact of the Canterbury earthquake in New Zealand), 『大阪大学大学院人間科学研究科紀要』第40号1–27頁 (Bulletin of Graduate School of Human Sciences, Osaka University, Vol. 40, pp. 1–27.)
- Otani, Junko 大谷順子. 2014b. Kantaberii jishin no jirei ni miru Nyujirando no jishin hoken to hisaichi jutaku no genjo bunseki 「カンタベリー地震の事例に見るニュージーランドの地震保険と被災地住宅の現状分析」 Earthquake insurance and post-disaster housing in the case of Canterbury Earthquakes in New Zealand, 『日本災害復興学会論文集』第6号9–22頁 (Journal of Disaster Recovery and Revitalization, No. 6, pp. 9–22.)
- Kimura-Steven, Chigusa キムラ・スティーブン, 千種. 2012. Kuraisutochaachi daijishin to Nyujirando seifu oyobi shimin no taiou: hisaimin toshiteno keiken wo tooshite 「クライストチャーチ大地震とニュージーランド政府および市民の対応—被災民としての体験を通して—」, Chapter 3-3 (pp. 73–108). In: Chiisana taikoku Nyujirando no oshieru mono: Sekai to nihon wo sendo shita minami no risokyo 『「小さな大国」ニュージーランドの教えるもの：世界と日本を先導した

- 南の理想郷』日本ニュージーランド学会・東北公益文化大学ニュージーランド研究所（編），（第3章—3）74–108頁，論創社 Edited by the New Zealand Society Studies-Japan, Ronsosha.
- Takeda, Mariko 武田真理子. 2014. Nyujirando Kantaberii jishin 「ニュージーランド・カンタベリー地震」(The New Zealand Canterbury Earthquake) 『海外社会保障研究』国立社会保障・人口問題研究所 No. 187, 31–44頁 Kaigai Shikai Hosho Kenkyu (The Review of comparative social security research), National Institute of Population and Social Security Research, No. 187. pp. 31–34.
- Nanami, Akiko 名波彰子. 2012. Saigaigo no gakusei borantia no hatten: Nyujirando to nihon nohikaku 「災害後の学生ボランティアの発展：ニュージーランドと日本の比較」『ニュージーランド研究』第19号1–15頁. (Student volunteer activities after the natural disasters in New Zealand and Japan: A comparative approach to their processes of development) Journal of Japan Society of New Zealand Studies. Vol. 19. pp. 1–15.
- Yamamoto, Hiroyuki 山本博之. 2014. Fukko no Bunka kukangaku: Bigu Deta to jindo shien no jidai 『復興の文化空間学—ビックデータと人道支援の時代』(Culture Space Science of Reconstruction: the era of big data and humanitarian aid) 京都大学学術出版会 Kyoto University Press.

English

- Campbell, Kelli. 2014. *The shaken suburbs: The challenging sense of home and creating a new home after a disaster*, Master of Science thesis, Department of Geography, University of Canterbury.
- Canterbury Earthquake Recovery Authority (CERA). 2012. *Greater Christchurch Recovery Update*, 7.
- Canterbury Earthquake Recovery Authority (CERA). 2014a. *Greater Christchurch Recovery Update*, 34.
- Canterbury Earthquake Recovery Authority (CERA). 2014b. *Greater Christchurch Recovery Update*, 36.
- Keeling, Sally, Fiona Alpass, Chris Stephens, & Brendan Stevenson. 2014. ‘Ripple effects’ on older people of the Canterbury Earthquakes: Results from a national longitudinal study. Paper presented at the 18th International Sociological Association (ISA) World Congress of Sociology (Yokohama, Japan).
- Miles, Sarah. 2012. *The Christchurch fiasco: the insurance aftershock and the implications for New Zealand and beyond*, Auckland: Dunmore Publishing.
- Otani, Junko. 2010. *Older people in natural disasters*, Kyoto University Press and Trans Pacific Press, Australia.
- The Press. 2013. *A City Recovers: Christchurch two years after the quakes*, Random House, NZ.

PHOTOS 3–29:



PHOTO 3. CERA (Canterbury Earthquake Recovery Authority)



PHOTO 4. Vacant lot after the collapse of the CTV building, which resulted in many victims. A sign says “Please respect this site.” City tour buses stop in front of this sign when disaster tourism was included within their courses.

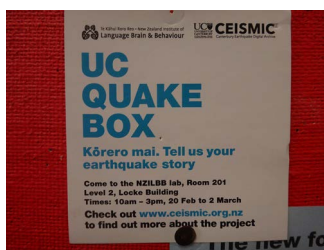


PHOTO 5. A container called the Quake Box, which was installed by Canterbury University. This is a part of a project to collect the opinions of personal experiences from earthquakes. (A project that lets people unload their feelings.)



PHOTO 6. People visiting the CBD, which was released to the public on June 30th, 2013. It had been designated as a no-trespassing area after the onset of the earthquake on February 22nd, 2011. (Photo on July 1st, 2013)



PHOTO 7. Those who are leaving Wellington from the airport by an airplane bound for Christchurch after the Wellington earthquake on August 16th in 2013. New Zealanders themselves acknowledged the transient population.



PHOTO 8. Construction worker wearing a fluorescent jacket saying “EARTHQUAKE REMEDIATION TEAM.” At the bus stop in front of Canterbury University, homeward bound after a day’s work.



PHOTO 9. Temporary housing occupying Linwood park.



PHOTO 10. CBD of Christchurch. Piled up containers are for preventing old buildings from causing an accident due to collapsing.



PHOTO 11. Rebuilding for our future: A sign board by the construction company Fletcher calls for this slogan all around the city.



PHOTO 12. Restricted entry and prohibition of illegal dumping of garbage sign by CERA. Many found around abandoned houses (Kaiapoi, 2013)



PHOTO 13. A house on liquefying land, which has been elevated for reuse. It will be returned to its original spot after construction of the ground base, or will be relocated if the construction doesn't improve the ground (Kaiapoi, 2013)



PHOTO 14. Canterbury University's temporary school buildings, Dovedale Village (July 2013)



PHOTO 15. Disaster Museum "The Quake City" (August 2014). Located on the corner of the temporary shopping area "Re: START" (See page 315) in the CBD, which was badly damaged.



PHOTO 16. Colourful signs installed in a plaza in front of the affected Christchurch cathedral. One month since the "Keep Out" order was dissolved, this plaza has an atmosphere of an open-air ceremonial museum. (August 2013)



PHOTO 17, 18.

Figure 9-1. Container-made temporary shopping area "Re: START" is an oasis for people

Along the street of Cashel Mall in the CBD, a reconstruction project called "Re: START" was developed and started operations in October of 2011. This is also referred to as a "pop up mall" or a "container mall." Shops made out of colourfully painted and piled-up freight containers are neatly lined up. They are nicely modified with large windows to look stylish. Since this instalment was built on the premise of rebuilding permanent buildings on the site, this project was supposed to end in April of 2014. However, it is still continuing after the prescribed end date. The shop on the far left of the bottom picture is the Scorpio books store, which is beloved by the townspeople in a society where sales of book are declining and where book stores are becoming a thing of the past in New Zealand (Photo taken on November, 2011).



PHOTO 19. Gap Filler Blue Pallet Summer Pavilion (July 2013)



PHOTO 20. Far beyond the street sign is a Tree House for Swamp Dwellers. Designed by Julia Morison, an artist in Christchurch (August 2014)



PHOTO 21. A house became unliveable due to liquefaction after the earthquake. A message “Please be gentle, I was once a Home ♡” is on the wall. (August, 2013)



PHOTO 22. Performing Arts Precinct. A ballerina is posted on the right wall (August, 2014).



PHOTO 23. People in the plaza enjoying chess by moving giant pieces. Behind them is the affected Christchurch cathedral (August, 2014)



PHOTO 24. A street view of Napier, which was reconstructed in the art deco style. This style was in fashion at the time, after suffering the devastating Hawkes Bay Earthquake in February 3rd, 1931. (New Zealand, North Island, August 2013)



PHOTO 25. The capital city of Wellington, which was established over an active fault. At the capitol, which is known by its nickname, “the beehive,” visitors can join a tour to see observe quake-proof dampers, which was developed by Professor Robinson at Canterbury University.



PHOTO 26. Transitional cathedral made of cardboard tubes designed by Mr. Shigeru Ban. This was built upon the collapse of the original cathedral due to the earthquake. Many volunteers helped in the construction (Photo from July, 2013. Construction completed in the next month)

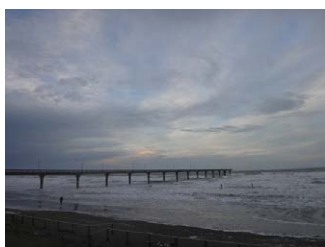


PHOTO 27. New Brighton, badly damaged due to liquefaction. Area where many sea lovers live. The younger generation returned for surfing (August, 2013). In September of 2015, a tsunami after the Chile earthquake was observed just like the one in Japan.



PHOTO 28. “Maori’s God of earthquake,” which was exhibited in the earthquake disaster museum (photo in page 313 in the original Japanese book: See Photo 15 in this paper.) (August, 2013)



PHOTO 29. On the ground is mosaic art which gives hope towards reconstruction, made by children to depict people holding hands. Full of prayers of rehabilitation are woven into the work of art, which is made out of broken dishware and was created by primary school children. (August, 2013)

* Mosaic made of broken potteries is to cherish their memories of the lost and to create the rebirth of the broken/lost pieces. In the areas affected by the 2009 Victorian Bushfires in Australia, many colourful mosaic mail boxes were made of pieces of broken potteries to cherish the memory and to wish the rebirth.